

# AMATEUR RADIO

NOVEMBER

1950

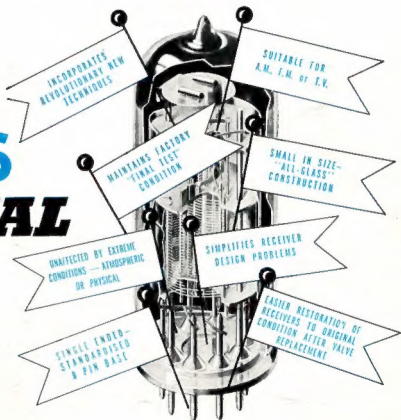
JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

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## EDITORIAL



Two years ago your Federal Executive, through the F.I.A. T.S., completed arrangements with Dr. Green, of the Commonwealth Ionospheric Prediction Service, for the publication in "Amateur Radio" of Monthly Prediction Charts, specially prepared for the magazine and covering Amateur Bands. The service was to be provided for a period of six months, in return Dr. Green requested that Amateurs using the service collaborate by submitting summaries of their reception data for research purposes.

We quote extracts from letter recently received from Dr. Green:—"No report on the usefulness of the predictions has ever reached this service, although the original trial period of six months has, of course, long since expired. As a result, we have been compelled to rely on other sources of information for the purpose of checking the predictions for the Amateur Bands and the benefit of these checks has been automatically passed on to the Amateurs in the form of improved forecasting techniques . . . It is to be regretted that the Amateurs who have made many contributions to the

progress of high frequency radio communication, have so far failed as a body to assist with the progress of the new art of ionospheric forecasting."

Federal Executive is astounded at the lack of reports in view of the fact that the service is obviously popular and well used as evidenced by Federal Council's directive to F.E. based on members' opinions, to request continuation of the service. However, before having the temerity to request continuation of the service for the third year we would like to be able to offer Dr. Green concrete evidence of the gratitude we feel towards him and his staff. YOU can help by jotting down your observations every month and forwarding same to your Divisional I.A.T.S. officer, whose duty it is to collate the information and pass it on to Dr. Green.

We are confident that the Amateurs are capable of far more co-operative effort than hitherto displayed, and we are sure that the Australian sense of fair play will not permit members to go on accepting a gratuitous service without making some endeavour to reciprocate.

FEDERAL EXECUTIVE.

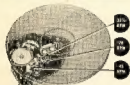
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# THE VK3WI ARRAY FOR 144 Mc.

BY LEN JACKSON\*

The problem recently arose of providing an antenna for the projected Two Metre Transmissions from the Club Rooms, Queen Street, Melbourne. A consultation between VK3JIM, VK3LH, and the writer was held to decide on a suitable type and resulted in the following specifications:—

- The antenna should be omni-directional, of turnstile or suitable type.
- It should consist of not more than two bays, to limit the size.
- It should have the highest possible gain consistent with the above two specifications.

The writer was of the opinion that this could best be achieved by using the same principles of feeding and phasing as were used in the "Lenfo" Series Phased Array (see January "Amateur Radio," 1950), and undertook the development and construction of a suitable antenna. The result has fulfilled all expectations.

Although not quite a perfect circle, the pattern is excellent and the gain in the region of 6 db over a dipole (in the most favourable direction of the dipole), compared with about 1.3 db for a two-bay turnstile of conventional type.

The array consists of four elements, two in each bay placed at right angles to each other, the two bays being stacked slightly over four feet apart (see Fig. 1).

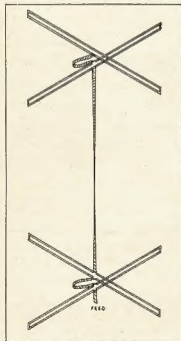


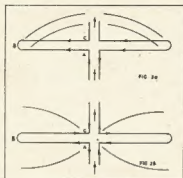
Fig. 1.

Isometric view of elements, 300 ohm ribbon phasing section, and feed line.

\* 8 Austin Street, Bentleigh, S.E.14, Vic.

The feed line is 300 ohm ribbon, as are also the phasing lines between elements. The elements have the appearance of folded dipoles, with the feed line attached to the centre of one leg; the feed line to the next element being taken from the centre of the other leg. It should be noted that the first three elements have the appearance only of folded dipoles, their behaviour being quite different.

In view of the controversy and criticism aroused by the dimensions of the "Lenfo" beam, it might not be out of place to review here briefly the theory of the series phased array, before proceeding further.



Referring to Fig. 2a, the radio frequency currents generated by the transmitter travel along the feed line towards point "A" forming travelling waves on the line. At point "A," at say the positive peak of the cycle, the instantaneous currents have the direction indicated by the arrows. At point "B" which is a quarter wavelength further along the direction of travel, the current is at zero. A further quarter wavelength brings us to the point "C," which is at the negative peak of the previous cycle. Since the direction of travel has been reversed at the end of the element, and the current is also reversed, due to the half cycle time lag in traversing the element, the currents at points "A" and "C" will be in the same direction, and therefore add.

A quarter of a cycle later, the currents will be as shown in Fig. 2b. Here points "A" and "C" are undergoing reversal of current, so there is no current flowing. At point "B" which is at maximum current, the currents in the two legs of the element are flowing in opposite directions, and therefore cancel. The result is therefore as though there were no current flowing in the element. A quarter cycle later again, the currents have the same distribution as in Fig. 2a, but are now flowing in the opposite direction. The net result therefore, is as though there were standing waves on the element, and the same radiation is produced, although actually, only travelling waves appear on the conductors.

It will be seen that the important dimensions on these elements is the distance from "A" to "C," via "B," since this must be exactly a half wave length to provide the required reversal of phase. However, since "A-B-C" constitutes a single turn loop, the self inductance and capacity will be somewhat higher than on a straight wire, thus reducing the speed of travel.

In practice, this dimension should be 0.9 of a half wavelength, or  $443 \div \text{freq.}$  It should be realised that the action is very different to the usual antenna and calculation by antenna formulae will result in an element which is too long. The impedance of these elements is 300 ohms, so the use of 300 ohm feed and phasing lines is essential to prevent standing waves.

To produce a circular radiation pattern, it is necessary to use two elements, placed at right angles with the centre of one immediately above the centre of the other, and feed the two with a phase difference of 90°. This is quite easily achieved by connecting the two by a quarter wavelength feed line, the required phase delay being provided by the time taken by the currents to traverse this length of line. Due to the high dielectric constant of the polyethylene insulation used on 300 ohm ribbon, the speed of travel is again lower than in space, and hence the line will be shortened by a factor of 0.8.

The final array is constructed as follows: The feed line is taken to the centre of the lowest element, which measures  $36\frac{1}{2}$ " from points "A" to "C," via "B," as in Fig. 2. The actual spacing of the two legs is not important, provided it is small. From the centre of the first element, a quarter wavelength of feed line,  $16\frac{1}{2}$ " connects to the centre of the second element placed immediately above, and at right angles to the

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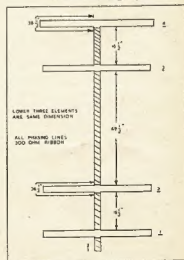


Fig. 3.



# Painless Extraction of Harmonics

BY F. DICKSON,\* VK2FB

It is one thing to read in a book that you can measure very high frequencies by means of a high frequency heterodyne wavemeter, using its harmonics, but it is quite another matter to do this in practice. Only too often there is no telling which harmonic one is hearing or even if it is a genuine harmonic at all. Furthermore it is disconcerting to find that some harmonics are stronger than expected while others are extremely weak. In fact, to do the job with any assurance of success, one must already have quite a fair idea of what the unknown frequency is, but unfortunately, this is not always the case.

There is quite an easy way of getting over this, a simple arithmetical juggle, which settles the question of which harmonic is being heard.

We need a wavemeter which will put out harmonics in the band in which we are interested and a detector or receiver which will let us hear the beats between its harmonics and the oscillator being measured.

The first step is to get a beat with some harmonic or other, note the wavemeter frequency and then shift it to the next higher frequency which gives a beat, and preferably a third, the next higher frequency again. Now the unknown frequency is multiple of all these three known frequencies and we can find unambiguously the harmonic numbers of them.

Let us call the lowest frequency we detect  $f_1$ , the next  $f_2$ , and the third  $F$ . The unknown frequency,  $F$ , can be put down as  $F = nf_1$

where  $n$  is the harmonic number.

As  $f_1$  was the next higher frequency which gave a zero beat, its harmonic will be 1 less, so we have

$$F = (n-1)f_1$$

and likewise, if we want a check to make doubly sure

$$F = (n-2)f_2$$

From two of these equations we can find the value of "n" thus,

$$(n-1)f_1 = F = nf_2$$

therefore  $(n-1)f_1 - nf_2 = 0$

and  $nf_2 - f_1 - nf_2 = 0$

We can tidy this up to get

$$n(f_2 - f_1) = f_1$$

so that  $n = \frac{f_1}{f_2 - f_1}$

As we know  $f_1$  and  $f_2$ , "n" is easily found and we know which harmonic of  $f_1$  we were hearing, and similarly which harmonic of  $f_2$ .

In the same way we can tell which harmonic of  $f_2$  was picked up, if we took the trouble to observe one. It is a good idea to take an extra point or two in the first rough check because in some oscillators various harmonics are extremely weak and we may have missed a beat, and perhaps what we took for  $f_1$  is really  $f_2$ . By noting several of these  $f_1$  we can tell if one has been missed because the gap between the two where one has been missed would be much bigger than between the others and would be clearly shown.

\* 38 Trevelyan Street, Cronulla, N.S.W.

Usually once the harmonic characteristics of the oscillator are known, the additional points are not necessary.

If an oscillating detector is used to observe the beats, or a superhet receiver, there may be some additional beats, but these can be distinguished because as they are with harmonics of the detector they would give wavemeter points much too close together, being several orders higher in frequency, and will normally be weak, so there is no trouble in distinguishing them.

Quite often it will be found that "n" does not come out as a whole number, which it obviously should be, and this is due to errors in the calibration or reading of the wavemeter and the nearest whole number is taken. If the value of "n" is much different from a whole number, it is high time to check the wavemeter calibration.

Now let us take an example of the method. We have an oscillator which we hope will put us in the 144 Mc. band and the i.f. is 20 Mc., so that the oscillator will have to lie between 144 and 148 Mc. We turn on the old faithful R/S receiver as our detector and that heterodyne wavemeter we built (or acquired) a couple of years ago. As the calibration is quite good around 7 Mc., we will operate in that region and the results of our heterodyning give us:

$$f_1 = 6.725 \text{ Mc.}$$

$$f_2 = 7.124 \text{ Mc.}$$

$$F = 7.570 \text{ Mc.}$$

From  $f_1$  and  $f_2$ , by the little formula, we get:

$$n = \frac{7124}{7124 - 6725} = 17.84,$$

so we can call it 18, and making a check with  $f_1$  and  $f_2$  we have 16.97 which we call 17, and the oscillator under test is therefore at—

$$18 \times 6.725 = 121.050 \text{ Mc. according to } f_1 \text{ and}$$

$$17 \times 7.124 = 121.108 \text{ Mc. according to } f_2 \text{ and}$$

$$16 \times 7.570 = 121.120 \text{ Mc. according to } F$$

Now the figures for "n" were 17.84 and 16.97, and as the latter is rather closer to a whole number, we decide to use  $f_2$  and  $F$ , rather than  $f_1$ , as they are probably more accurate. Averaging the value of  $F$  from  $f_2$  and  $f_1$ , we get  $F = 121.114$ .

It happens that the oscillator actually measured in this case was a crystal oscillator about 3.028 Mc., with harmonic amplifier and the real value of  $F$  was 121.115 Mc.

This meant that we were multiplying 40 times instead of 48 which would have put us in the band at 145.339 Mc. As a measurement the result was quite good, but it shows that the wavemeter calibration could be improved around 6.7 Mc.

Since we now have an unambiguous method of using harmonics, we can set about v.h.f. measurements with complete confidence about the harmonic order and have only to worry about the accuracy of the wavemeter used.

It is also to be noted that if we have access to a number of accurately known v.h.f. frequencies, we can reverse the

above process and calibrate our heterodyne wavemeter from them with great accuracy.

One further point is worth mentioning, this general scheme also works out for determining low frequencies by the inverse method. Suppose we want to fix a frequency around 60 Kc., we can use broadcast station carriers instead of v.h.f. carriers and calibrate a i.f. oscillator very nicely indeed. Obviously, for a rough check one can use the fact that the interval between successive harmonics of the i.f. oscillator heard in the B/C band is equal to its frequency.

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## VK3WI ARRAY FOR 144 Mc.

(Continued from Page 3)

first. Three-quarters of a wavelength of line, 49½", then connect to the third element, which is parallel with the first, and spaced the length of the feed line above the second. This length of line is required to bring the first and third elements into phase, while the spacing is about right for optimum gain.

Another quarter wavelength of feed line connects the third and fourth elements, which are placed the same way as the first two. The fourth element is required to terminate the line with an impedance of 300 ohms and hence takes the form of a standard folded dipole, 38½" long. All the dimensions have been calculated for the centre of the band (146 Mc.), the array being very broad-band, covering the entire band with ease.

Since elements one and three must be in phase, also elements two and four, care must be taken to connect the phasing lines the right way since reversal will result in a pair of elements being out of phase.

This is quite simple if carried out as follows. The elements are laid out and connected as shown in Fig. 3, the same wire in the phasing line connecting to the left hand side of the element at

each end. Elements two and four are then rotated in the same direction, until they are at right angles to the other two. Elements one and two are then moved up together as close as practicable, also elements three and four, while two and three are separated by the length of the phasing line between them. The array is then mounted so that all the elements are horizontal, with three and four vertically above one and two.

Although a certain amount of experimental work was entailed in the development stages, the final array was built up in the manner and to the dimensions described, no tuning or adjusting of any description being necessary. If the instructions are followed carefully, no difficulty should be encountered by anyone wishing to duplicate this array.

It proved impossible to make field strength measurements in a suburban back yard, reflection from clothes lines and other conductors having a very great effect upon the pattern. Therefore testing had to be confined to checking under actual operating conditions; the theoretical predictions for gain, etc., being very well borne out.

For the foregoing reason, it is recommended that the array should be mounted as high as possible, well away from any other conductors, such as other aerials, roofs, guy wires, etc.

In conclusion the writer sincerely thanks VKs 3FO, 3ABA, 3EM, 3EN, 3DY, John Dawes and particularly Herb Stevens, VK2JO, for their valuable co-operation and able assistance in the testing of the "VK3WI Array."

### FREQUENCY ALLOCATIONS

The following is a list of the bands available for use by the Amateur Service in Australia, followed by the type of emission allowed on these bands.

3.5 to 3.8 Mc.—A1, 3, 8a, 8F3.
7.0 to 7.3 Mc.—A1, 2, 8a, 8F3.
14.0 to 14.4 Mc.—A1, 8, 3a, 8F3.
26.98 to 27.23 Mc.—A1, 3, FM.
28.0 to 30.0 Mc.—A1, 8, 3a, 8F3.
42.0 to 44.0 Mc.—A1, 2, 3, FM.
144 to 148 Mc.—A0, 1, 2, 3, FM, Pulse.
288 to 298 Mc.—A0, 1, 2, 3, FM, Pulse.
570 to 588 Mc.—A0, 1, 2, 3, FM, Pulse.
1110 to 1300 Mc.—A0, 1, 2, 3, FM, Pulse.
2300 to 2450 Mc.—A0, 1, 2, 3, FM, Pulse.
3650 to 3850 Mc.—A0, 1, 2, 3, FM, Pulse.
10000 to 10500 Mc.—A0, 1, 2, 3, FM, Pulse.
15000 to 21000 Mc.—A0, 1, 2, 3, FM, Pulse.
50000 Mc. and higher—A0, 1, 2, 3, FM, Pulse.

Note.—8F3 emission represents a maximum deviation from the quiescent frequency of plus or minus 8 Kc.

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They are ideal for providing the coupling means between such valves as 6V6s and 6L6s, or 6L6-807, or 6L6-813 combination. They are not designed to handle a great deal of power and normally should not be used in the output circuit of 807 or larger valves.

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- "Labgear" Wide-Band Couplers are made in six models as follows:—

#### Catalogue No.

#### Frequency Range (Mc.)

E.5018	28.0 — 29.7*
E.5018/A	21.0 — 21.5†
E.5018/B	14.0 — 14.9
E.5018/C	7.0 — 7.5
E.5018/D	3.5 — 3.8

\* The 10 metre coupler is substantially flat over the band 28.0-29.0 Mc. Usable drive, however, is provided up to 29.7 Mc.

† Catalogue No. E.5018/A will be available when 15 metre band is allocated.

## Price 41/- each

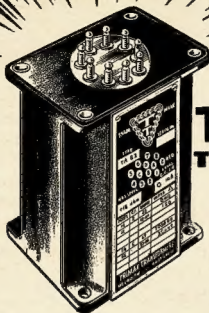
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# DX NOTES BY VK4QL

## IONOSPHERIC PREDICTIONS FOR THE AMATEUR BANDS

NOVEMBER, 1950

Nine of the charts, prefixed by the letter "C" for Canberra, refer to forecasts for the South-Eastern Australian States. The remainder, prefixed by the letter "P" for Perth, are for Western Australia.

The Canberra charts refer to the following world zones:—

Zone	Region	Terminal
1	Western Europe	London
2	Mediterranean	Cairo
3	N-West America	San Francisco
3a	N-East America	New York
4	Central America	Barbados
5	South Africa	Johannesburg
6	Far East	Manila

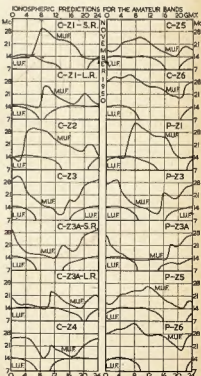
The Perth charts are similar to those based on Canberra.

### QUIZ

The Prediction Service welcomes comments on the accuracy of its predictions. In particular, answers to the following questions on the Canberra-San Francisco circuit would be useful:—

1. Were good conditions experienced on 7 Mc. for the period 0700 to 1600 hours G.M.T.
2. Was the 14 Mc. band workable between 1100 and 1600 hours G.M.T.?
3. Was the 28 Mc. band workable for several hours around midnight G.M.T.?

Answers to the Quiz should be sent to the W.I.A. and should, if possible, refer to consistent results obtained on the majority of days in the months.



experience on 7 Mc. one night, when a commercial told him to "GET." We wouldn't object if some of them took that to heart instead.

What is now routine for Dave, 2EO, is the winning of the 1950 A.R.R.L. DX Contest, with 2GW and 5FM 2nd and 3rd respectively.

I had hoped to hear from some of the Interstate DXers this month, to let me know what had been happening in other States, but the only info is from 3CX, who is trying to organise himself sufficient QSLs for his W.A.P. Award. Alan has 133 countries worked and 112 confirmed. Incidentally, the W.A.P. Certificate is quite attractive and well worth getting. Things got a bit out of hand in the issuing of the Certificates recently, but ZL6GX has again taken over the reins and promises better service. This Certificate is going to be a little harder to come by these days with some of the required prefixes disappearing off the bands. [See "A.R." March, 1949, p.16, and May, 1949, p.12, for rules.—Ed.]

QSLs of the best picking this month received by 4TU and 4QL were ZD4AM, PK5JT, NY4DD and VR4AD plus UB5 and U18. That's about all for this month, but "please, oh please," let me have some news of what ticks round VK.

• The thought for the month, prompted by a remark from ZD4AM: "If a station sends, with his CQ, QLM, HM, U5 or D10, it means 'Do not reply on my own frequency.'"

### DX C.C. LISTING

PHONE			
Call	No.	Call	No.
VE3BD	1453	VE4ES	9 251
VE3EE	10 148	VK4JP	8 114
VE3BE	3 161	VE3AW	14 203
VE3KX	4 240	VE3AD	19 103
VK6RU	1 139	VE3AF	15 108
VE3DD	6 130	VE3H	6 109
VE3LN	11 135	VE3JE	7 100
VK4HR	13 132		
CW			
Call	No.	Call	No.
VK3BZ	6 383	VE7LE	17 112
VE3ED	3 183	VE7JE	31 108
VE3KX	4 240	VE7BE	13 107
VE3FH	15 149	VE3OW	10 107
VE3QL	5 141	VE3EX	23 105
VE3VW	4 140	VE3VY	27 105
VK4EL	0 140	VE3XX	30 105
VK3KB	10 128	VE3PH	31 105
VE3EA	18 126	VE3J	32 104
VK4RK	6 121	VK4F	39 102
VK4RF	11 125	VE3APA	14 101
VE3HU	10 125	VE3NO	19 101
VE3EK	3 123	VE3GO	36 101
VE3UM	12 116	VE3BK	38 100
VE4DA	7 115	VE3VL	24 100
VE4DO	20 118		
OPEN			
Call	No.	Call	No.
VK3BE	4 302	VK5FL	26 116
VK6RU	8 270	VK5AT	14 113
VE3KX	1 167	VK4RO	31 110
VK4HR	7 267	VK3Z	24 110
VK3BG	3 160	VK3ZO	25 108
VE3KW	13 161	VK3YL	11 108
VK3DH	5 160	VK4BM	30 106
VE3JE	12 154	VK3J	33 105
VK4EL	10 140	VK3AWN	36 105
VE4DO	15 140	VE3VN	18 104
VE3MC	5 139	VK3V	37 104
VK4RS	24 139	VK3HZ	77 103
VK3OP	19 137	VK3KB	30 103
VE3DD	23 126	VE3TI	37 103
VE3AD	38 125	VK3H	38 102
VK3AH	9 128	VE3RK	31 102
VE3LN	12 128	VE4TT	35 102
VK3NZ	16 127	VK3ACK	6 100
VK4FJ	22 120	VK3TG	39 100
VE3LE	23 116		

The month of September was one of varying fortunes and effective blanketing for the "Ion Curtain," which resulted in generally very poor conditions on all bands except for Friday and Saturday, 16th and 17th, when the 14 Mc. band was wide open. Other bands, including 28 Mc., showed some improvement, but not to the same extent. From then on the whole of the high frequency bands deteriorated, until at the end of the month, very few signals of any note and strength were getting through.

Despite the poor conditions some things of note occurred. Firstly, from my own personal angle was the working of DL1FF on 7 Mc., thus completing my 7 Mc. W.A.C. Secondly, the ease with which South Africans were worked on 7 and 14 Mc. for the first three weeks of the month. On 14 Mc., VQ8 and ZS stations were workable at 9 p.m. E.S.T., whilst on 7 Mc., a number of ZS, VQ2GW, ZE3J, CR7AJ were worked between 6 and 7 a.m. In the 4WI broadcast on 9th September, it was said good signals, up to S9, were received from Europe in Brisbane. There was no trace of those signals here, nor of the VKs working them. Very few Europeans were heard on 7 Mc., but southern stations seemed to be working them OK. KV4AA and KP4CC were operating on 7 Mc. in the evenings, at times better strength, than the few W signals getting through.

Some very "tasty" DX was heard on 14 Mc. this month, but a lot of it got away. The calls included 3VB8D, YD6DE, SV0WM, GC3ZU, AF2X, 4X4CR, ZD6EF, 4X4CL, ZD4AB, VQ6AD, VQ8CE, IS1CNG, IT1KB (Sicily), PK5JT, ZC4HV, VP1AA, VP6CBI, VP7NM, C3KS (Formosa), ZK2AA, ZM6AK, 954AL, FF8JC, QG5AS, FF8JC was worked at good strength at 7 a.m. with good strength each way, yet no other readable sigs were on the band. Activities this month have been quite restricted, so there may have been other openings, with the consequent good DX getting through. It's just a matter of being around when those things happen these days.

ZS licensees have now reached three letter calls, so there must be quite an increase in calls being issued. Increased activity was also observed from VU stations during this month.

One thing occurred on the band one night which I never expected to see. It was the fruitless CQs of John, VK1PG. I think he eventually gave it away without a QSO.

Some of us heard an interesting "duel" between W6AM and TA3GVU on 14 Mc. one afternoon. W6AM apparently wanted to get a new country on phone and tried all he knew to get TA3GVU to go in the phone band for him. After a number of "pleading" over, TA3GVU said, "Nothing doing," and sent QRZ without listening further for W6AM! A number of VKs then benefitted from a TA QSO and made comment on what had taken place.

The commercial interference on 14 Mc. seems to have increased, while on 7 Mc. it is extremely hard to find a clear spot without a commercial spreading over the frequency. 4TU had an

# W.I.A. 1951 NATIONAL FIELD DAY

## GENERAL RULES

1. The National Field Day Contest of the Wireless Institute of Australia will be held over the week-end of 27th and 28th January, 1951, and will commence at 1500 hours E.A.S.T. on Saturday, 27th, and continue through until 2359 hours, Sunday, 28th.
2. The Contest is limited to portable stations operating within the Commonwealth and its mandated territories on a power not exceeding 25 watts with the antenna connected.
3. A portable station, for the purposes of the Field Day, is defined as one whose power is not obtained from either private or public mains, shall not be located closer than five miles to the home location of the operator(s), and shall not be situated in any occupied dwelling.
4. No apparatus is to be set up or erected on the site of the portable station earlier than 6 (six) hours prior to the commencement of the Contest. A station may be moved from one site to another within the same State during the period of the Contest.
5. More than one operator may be used in the operation of the portable station, provided that all operators are licensed Amateurs.
6. Operation may be on any of the recognised Amateur bands, and more than one transmitter may be used, providing only one transmitter is used at any one time.
7. When calling, c.w. stations will use the call "CQ FD," and phone stations will use the call "CQ Field Day," to indicate they are portable stations. Attention is directed to the requirements for portable station operation as defined in the P.M.G.'s Handbook for the guidance of Amateur Operators.
8. SECTIONS.—The Contest is divided into 3 (three) sections, namely,

open, c.w., and phone. The Open Section shall consist of both phone and c.w. operation. Participants may enter for all sections providing a separate log is entered in each case.

9. LOGS.—Logs must be forwarded through the Division to reach Federal Executive not later than the 20th February, 1951, and decisions of Federal Executive in all matters relating to the Contest will be final.

10. The operator(s) will choose the most suitable 24 hours of operation from the total operating time of 33 hours, and submit this 24 hours' period as their log for the Field Day. Any lesser period than 24 hours may be operated.

11. Logs must show the location of the portable station(s), names and call signs of the operator(s) in the party, a description of the transmitter(s), receiver(s), antenna(e) and the power supplies. The power input to the final stage(s) with the antenna(e) connected (which must not exceed 25 watts) will also be shown.

12. Log entries are to be in the following order: Date, time (E.A.S.T.), station worked, Amateur band used, report sent, report received, contact points claimed, bonus points claimed, QTH of station worked, and portable operator's call. A summary at the conclusion of the log will facilitate checking.

13. The completed log must be signed by each of the operators with a statement that the P.M.G. Regulations and the Rules of the Contest have been observed.

14. SCORING.—For the purposes of the Field Day, the following constitute separate VK districts: VK2, VK3, VK4, VK5 (South Australia), VK5 (Northern Territory), VK6, VK7, and VK9 (Tasmania). A complete exchange of report and QTH is necessary before any points can be claimed.

16. Points will be awarded as follows:
  - (a) For contacts with a fixed station within the Commonwealth (Rule 14) outside the competitor's State ..... 1
  - (b) For contacts with other portable stations in the Contest within the same State ..... 2
  - (c) For contacts with stations in Asia, Nth. America, and Oceania (outside the Commonwealth, Rule 14) ..... 3
  - (d) For contacts with stations in Europe ..... 5
  - (e) For contacts with stations in Africa and South America ..... 7
  - (f) For contacts with other portable stations in the Contest outside the State ..... 10
  - (g) A bonus for each Continent worked on each band. For Oceania, the contact must be outside the Commonwealth (Rule 14), add to the final score ..... 25
  - (h) A bonus for each new State or Country worked on 50 Mc, add to the final score ..... 25
  - (i) A special bonus for each Interstate or Overseas contact on 144 Mc. and above, add to the final score ..... 50

15. AWARDS.—Attractive certificates will be awarded to the outright winners in each section, namely, open, c.w. and phone. Certificates will also be awarded to the winner in each State in each section. Further certificates can be awarded at the discretion of Federal Executive. The outright winners are not eligible for the State awards.

18. Certificates will be awarded to each operator of the winning stations provided each operator has contacted at least 25% of the stations contacted.

19. In addition to the certificates for the outright winners, an order to the value of 3 guineas, to be divided between the place getters in each section, will be awarded for the purchase of a trophy or equipment.

## DIVISIONS ARE ASKED TO ORGANISE STATE TEAMS TO ENSURE ACTIVE PARTICIPATION BY ALL STATES IN THE NATIONAL FIELD DAY CONTEST.

## 4th All-European DX Competition, 1950

Contest Calls.—European Amateurs will call stations in the remaining five continents by "CQ AW" (CQ All World), "CQ AF" (CQ Africa), "CQ AS" (CQ Asia), "CQ EU" (CQ Europe), and "CQ OC" (CQ Oceania).

### RULES

1. Eligibility.—Amateurs operating fixed Amateur stations in any and all parts of the world are invited to participate.
2. Objective.—Amateurs of all European countries will try to work as many Amateur stations in remaining five continents as possible under the rules and during the contest period.
3. Conditions for Entry.—Each entrant agrees to be bound by the provisions of this announcement, the regulations of the licensing authority, and the decisions of the S.S.A. Award Committee.
4. Entry Classifications.—Entry may be made in either of two CW or Phone sections. CW scores are independent of Phone scores. Entries may be made only by single-operator stations at which one person performs all the operating functions. Multiple-operator stations obtaining any assistance from further persons are excluded from participation. Competition takes place on the following bands: 2, 5, 7, 14, 18 and 30 Mc. in both the CW and Phone sections.
5. Contest Periods.—There are two week-ends, each 48 hours long; one for CW work and one

for Phone. The CW section starts at 0001 GMT, Saturday, 15th November, 1950, and ends at 2400 GMT, Sunday, 18th November, 1950. The Phone section starts at 0901 GMT, Saturday, 2nd December, 1950, and ends at 2400 GMT, Sunday, 3rd December, 1950.

6. Valid Contacts.—In the telephone section, all claimed credits must be made both ways only on CW. In the Phone section only voice-to-voice contacts count.

7. Exchanges.—Each participating operator will choose three figures as self-assigned number. CW contestants will exchange six-figure numbers, each consisting of an RST report plus the three self-assigned numbers. (Examples are given in the sample log.) Phone contestants will exchange five-figure numbers, each consisting of a Readability-Strength report plus the three self-assigned numbers. The self-assigned number remains the same during the whole contest period in either or both the CW and Phone sections.

8. Scoring.—(a) Points: Every European station earns one point upon receiving acknowledgment of a number sent, and 3 points upon acknowledging a number received. Stations outside of Europe earn 2 points upon receiving acknowledgment of a number sent, and 1 point upon acknowledging a number received. Each contestant in any part of the world can therefore earn at least 5 points for each contact.

(b) Final Score: European stations multiply the total points earned under Rule 8a by a multiplier

which is the sum of all non-European countries worked on each band. Countries will be those on the A.R.R.L. Countries List; valid at the time of the Contest, with the exception that each 1st W and VE licensing areas count as a separate country, and there is 18 licensing areas: 10 in the United States and 8 in Canada.

Stations outside of Europe multiply total points earned under Rule 8a by a multiplier which is the sum of all European countries worked on each band. Here likewise, only those European countries will count which are on the A.R.R.L. Countries List valid at the time of the contest. All W and VE licensing areas complete separately.

9. Repeat Contacts.—The same station may be worked again for additional points if the contact

## Famous Last Words

"The Contest starts in two minutes and I haven't got any grid drive."

is made on a different frequency band. The same station may be worked again on the same band only if the complete exchange for a total of three points was not made during the original contact on that band.

**10. Quotas.**—Any European contestant may, in the CW section, work the maximum of three different stations of any country (WVX licensing area) outside of Europe on each band. Thus the maximum possible number of points which can be earned per country per band is 9. There is no such restriction for stations outside of Europe, so that they may work as many European stations as possible.

In the Phone section of the competition the number of contacts with any country, respecting Rule 8, is restricted for neither European nor non-European stations.

**11. Reporting.**—Control work must be reported as shown in the sample form. Each entry must include the signed statement as shown in that example. Contest reports must be mailed no later than 31st December, 1960, decisions being the date of the postmark. Reports received after 30th April, 1961, will not be considered. All reports are to be sent to the address: SWGD, S.S.A. Contest Committee, Postbox 609, Götterburg 6, Sweden.

**12. Awards.**—(a) Suitable certificates will be awarded to the best three amateurs attaining the highest score in each country and each W and VE licensing area.

(b) Certificates will be awarded separately for work in the CW and Phone sections.

(c) Contest results will be sent to the International Amateur Radio Union for publishing in "QST" as well as to Amateur Societies in each country.

**13. Judges.**—All entries will be passed upon by the S.S.A. Award Committee, whose decisions will be final.

**14. Disqualifications.**—Off-frequency operation will disqualify. Low time reports in logs will also be disqualify as will as Amateur Societies in each country as grounds for disqualification.

# LOG, FOURTH ALL-EUROPEAN DX COMPETITION

(Logs from Europe, for each band)

CW Entry  
Call .....  
Name .....  
Address .....  
Antenna(e) .....  
Transmitter Tubes .....  
Plate Watts (input last band) .....  
Number Hours Station Operation .....

Band	Mc.	5	7	14	28	50	Total	Different Countries Worked
No. DX Stations Worked	2	4	6	1	—	13		
No. Countries Worked	2	4	5	1	—	12		31

(Logs from points outside of Europe indicate, for each band, in the above part of the log: "Number of European stations QSOed" and "Number of European countries QSOed.")

Date and Time GMT	Station Worked	Country	Worked Record of New Countries for each freq. Band Mc.					Numbers Exchanged		Points
			5	7	14	28	50	Sent	Received	
Nov. 45— 00.05 01.47 02.18 03.11 03.30 10.54	WPMV	USA3	2	1	—	—	—	579555	589777	2
	VEBQ	Canada8	2	—	—	—	—	489555	589122	2
	KP4PY	P.Rkey	3	—	—	—	—	589555	589900	3
	W7PU	USA7	—	1	—	—	—	579555	489878	1
	VEAMV	AMV7	—	1	—	—	—	589555	589777	2
	USAE	SSR	—	1	—	—	—	589555	589111	1
Nov. 16— 02.23 04.01 17.45 20.58 20.58 21.17 22.55	WIDED	USA1	2	—	—	—	—	459555	9	1
	CMIAE	Cuba	4	—	—	—	—	589555	489899	4
	Z8GUK	N. Afr.	3	—	—	—	—	589555	589848	3
	LUN	Argent.	4	—	—	—	—	589555	589855	4
	YK1AV	Isra.	4	—	—	—	—	489555	489555	4
	WSPOL	USA5	3	—	—	—	—	589555	589900	3
	W4ML	USA4	2	—	—	—	—	359555	7	1

Multiplier: 2 plus 4 plus 1—12

Final Score: 86 (points) multiplied by 12 (multiplier)—1032

(Logs from points outside Europe can contain in the above part of the log only European Stations.)

I certify, on my honor, that I have observed all competition rules as well as all regulations established for Amateur Radio in my country, and that my report is correct and true to the best of my belief. I agree to be bound by the decisions of the S.S.A. Award Committee.

..... Operator's Signature.

## NOVEMBER SPECIALS!

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## Useful Workshop Hints

By N. E. COXON,\* VK8AG

Miss print W.E. Coxon

Keep a container in which to drop all odd nuts, screws, etc., that are come by from junk, alterations, or off the floor. Then, apart from a valuable source from which to find that odd screw, etc., periodically the container can be emptied into respective screw and nut compartments.

Sheet aluminium is best divided by nicking and breaking. Have an 18" length of 1" angle iron held together by 2 x 1/4" bolts at the ends to form a clamp. Mark the line to sever, clamp and hold in vice, cut with point of a strong pen-knife, and bend several times, and the break is clear, straight, and no twists in the aluminium.

Tinned copper wire used as bus bar often is tarnished when bought. To clean, rub with a wire file brush, and to straighten, hold end in vice and hold other end in flat nosed pliers. Give a sharp jerk and the wire is straight.

Whenever a screw is shortened by cutting with pliers, always file off the burr, for you never know when it will be necessary to remove the nut, and no end of difficulty is experienced when a screw head has been chopped off. Brass screws are bad enough, but steel screws treated in this way are time wasters.

When tapping sheet metal, it is safer to hold and tap the hole by using the tap (1/10th" to 5/32nd") in a wheel-brace.

Paint with various bright colors, handles of small screw drivers, spin-tight spanners, and various other tools. It makes them easy to find when bundled together on the bench (not always as tidy as desirable).

Keep a small bottle of thin oil with a wire dipper handy. Many a nut, wood or iron screw is coaxled along by a little lubrication.

When a small drill is broken, insert and solder the broken portion into a shank. It makes a more robust drill, and uses the portion with the best cutting section. The contributor has often deliberately broken off 1/2" from a small drill to fit it to a larger shank. Solder is quite sufficient to hold it.

Wheel braces will take several size larger drills if the shanks are filed with three flints. By such means a 1/2" drill can be made to slip into a wheel-brace made for 3/16" shanks. The flats also prevent the drills slipping in the jaws.

\* Leithdale Road, Darlington, West. A.

# FIFTY MEGACYCLES AND ABOVE

Compiled by J. K. RIDGWAY, VK3CR.

As the DX sector approaches, activity on the 50 Mc. band is increasing, and operators are anxiously awaiting for signs of band openings. At the time of writing, no definite opening was to be had although an undefined signal, from the north-east, believed to be KH6s, have been heard in N.E.W.

This contest will report a new N.E.W. DX contact on 576 Mc. and the re-establishment of contacts between Sydney and Newcastle on 50 Mc. and 144 Mc.

An excellent suggestion comes from VK5KLL—Clarry suggests that city and country v.h.f. operators should all together on 7 Mc. or 8 Mc. to hear the SWI broadcast when mutual problems could be discussed.

## VICTORIAN V.H.F. GROUP NOTES

The September meeting of this group, attended by 21 members, associates, and visitors, was held at the Institute Rooms, 181 Queen St., on the evening of 20th Sept. The business of the night covered such things as election of a new Secretary, reports of activities of various members of the group, the proposed field day on 10th October, and was rounded off by a talk on Radio Propagation by H. E. Dickinson, 3BR.

Hon. Secretary Bert Leckie, 3LH, found that his work was interfering too much with his job as Secretary of the group, so the group had to find a new Secretary. Dick 2ALH, was elected to this post and the good wishes of the group go to you Max. To Bert, we say many thanks for his job and to express the hope that all serious future data your services may be available to the group once again. SABA reported on progress with the power supplies for 3WL. These are well under way, but time is required for the work to be completed. They will be ready for the field day.

We have to acknowledge in response to our recent letter to the members of the North Island Zone giving details of the activity of its members on v.h.f. bands. The following stations are active: 3FP, 3AT, 3RH all at Shepparton on 144 and 50 Mc., 3UI at Tatura on 144 and 50 Mc., and 3VY at Wangaratta on 144 Mc. It is known that quite a number of Hams in the other zones are active on 50 Mc. and 144 Mc. and replies from these areas are received there should be quite an impressive list of these stations.

The prizes for the field day competition on 10th October will be the form of an award of £110/- in the case of the section for portables and £1 in the case of the section for home stations. One of the main supply houses, the winners can select their own prizes within the limits of the amounts mentioned. The object of the contest was merely to provoke more interest in the field day.

3RR held the first of its meeting while he read extracts from an article in the August issue of "Radiohobbies" concerning the propagation of radio waves at various frequencies. Points worthy of one or two paragraphs in mention were: (1) the article strongly recommends perusal of the article with particular attention to the charts, graphs and tables. One table, which gives propagation factors for various types of terrain, gives a clue to the reason why the only interstate contacts in Australia on 144 Mc. to date have been between VK5 and VK7. (2) the propagation factor of 4.5 over water compares with only 1.8 for forest country. Altogether a very interesting and informative evening was much appreciated by all present.

## 50 Mc. ACTIVITY NEW SOUTH WALES

3YV has returned from a holiday in the mountains and again conducted the 3YV V.H.F. band, but is not so much as the doctor has ordered him to keep away hours. 3WQ acted as 3YV on 50 Mc. while Vaughan was away. 3ANP has increased power using an 815 modulated by a 60 Mc. oscillator. 20S, of Dapto, visited Sydney and was heard over 3YV. Lindsay was looking for tubes and ideas for v.h.f. contact with Sydney. 3BU is pleased to hear his new suburban location and is trying to contact 3YN Temot and 3GU Canberra.

3RX contacts the Confindere regularly and relay v.h.f. dope from 3UDT (Kewarra) to 3YV. 3RE is ready to shift to a new QTH and will be QRT for some time. 3RQ is active on the band. 3ANL, of Mildred, uses an 80 metre mpp on the band. E has one and fled to the Church. 3RQ 20S has erected a beam on the new tower and awaits results. 3ANV, of Maxwellbrook, uses a 3-5 valve with a beam and regularly contacts 3GOM. 3ADT has a new four element beam—thanks for the dope, Jack. There has been some shuffling around of frequencies on 50 Mc. and some of the already heard stations may be surprised when next they open up on the band.

## VICTORIA

News of VK6s on 50 Mc. is rather sketchy this month. The band has been kept warm by the old regular, with the return of a few new who have not been heard for some time. 3BQ still calls CQ on c.w. on 50.312 Mc. at 1200 and 1500 hours

daily. He is usually answered by 3QO on approx. 51 Mc. and/or 3RR on 50.25 Mc. Night time usually sees the regular habit of the band on the job, prominent are 3BQ whose s.m. signal is much improved, 3RH still very busy with 3SL and 3VJ, 3SL and 3TH; 3RR who is heard almost nightly, 3JML who is suffering from a badly 360 ohm feeder which Eric is hoping to replace with co-ax shortly.

Ballarat is well represented with 3EL and 3GM. 3AER is still active and we are pleased to hear 3FP and 3JZ back again. 3AIX puts in time on 50 and 580 Mc. to good advantage. 3XA has not been heard for two weeks but we know that Don has been kept pretty busy rocking the cradle. 3YS and 3ABA are still active with 3SL and the country boys, especially 3UL and 3APP who still pin in E.S. signals to Melbourne and the Mornington Peninsula.

Portables appear to be in fashion. 3APP has a new portable rig with a 12A5 in the final—worked into Melbourne and Marree from Pretty Sally using h.c. antennae. 3RE has a new portable rig in his car using an 883 in the final and on Sunday, 1st October, he went to Dunes Beach, primarily to try to contact 3VL at Ormeo, but although Keith heard 3R on two occasions, contact was not made. Keith worked other stations in the Eastern Zone with good signals both ways. Also portable on 1st October was 3AYJ, Jeff was operating from Burks Lookout. Mt Dandenong, and made quite a few nice contacts.

## SOUTH AUSTRALIA

To prove the theory that the north-south path is open more often than to the east or west, active stations on 50 Mc. are needed this summer on the Northern Territory. To this end, your service has written to the club in Darwin, and also 3MO has just returned from spending a few weeks in Darwin selling 50 Mc. Now about it, you Darwinites? Are you station will do.

There is a sad story to the report in last month's notes that 3UD had his beam up—it is now down again. Yes, fell down. 3JD, with 3GR and 3RL, decided to lower it without waiting for 50P. One guy was too slack. You should have seen the smile on 50P's face. We consoled Jack that it didn't bend MUCH. 5BC was a visitor to the Sept. meeting. After making adjustments to Rx and beam, Hughie says he can now hear city signals on 50 Mc. almost whenever they are. Also present was 5MR, who tells us he has a xtal converter on 5. At the recent air pagant at Parafield, 3CU was seen active. Holding a wing up of a glider.

3RO is now fully licensed and was seen on 30.7 using 2 watts in a 3-5, first triode as harmonic oscillator, second half doubling to 60 Mc. and modulated by the 30 Mc. phone rings with three 100 watts working across town, farve be red when they read this. That is something worthwhile promoting. If you must chat across town why not change to a band where you only need one watt to do the job and not clutter up a

DX band for others. 5PQ has been heard active on 50 Mc. 3AX at Gawler heard on 7 Mc. saying he was having 50 Mc. beam trouble. Proposes to use a 3R3 on 144 Mc.; already has a superreg. Rx. 3BD has been having v.t. feedback in his mod. transformer. Relays 5VL on 50 Mc. 3BU has added two extra elements to his beam. Total now six. There was a break through to VK9 on the 16th September around 9 p.m. No reports of any contacts received. No news Asst. been received from the country boys. Come on chaps, these notes are for your benefit!

## 144 Mc. DOINGS OF THE MONTH

N.E.W.—New stations are popping up including 3ACH with a modified 11A5, 3AQB and 3PD with 3SL and 3L2 with a 3SL rig operated with a simple 7-3 beam in the final. 3YX has a mod. one with 3-4 x 3 beam and puts a 90 sig into Cosmokon from Lambton. He is inquiring about using a dipole country boys. Come on chaps, these notes are for your benefit!

Victoria—Stations heard during the past month have been: 3ABA, 3YS, 3BQ, 3CP, 3AKE, 3VP, 3BW, 3PO, 3RH, 3DA, 3RR, 4E3, 3ATB, 3ADT, 3NW, 3ARE, 3ASB, 3DR, 3RP, 3OP, 3VJ, 3SL, 3GM, 3AKR, 3APP and 3TO.

Tasmania—The gang are getting fired up on 144 Mc. for the DX season. 3AM are using a terrific signal now from a 913 and a "Lento" beam. The general listening time is 1915 and anyone around get together for a chat. Those on being 3PY, 3QO, 1VW and 3ML, with 1DR threatening to come on again. 7TE has been building a cascade converter in between beats on the double bass. 1BQ with his bang band especially with cascade with converter, whilst 3PF has improved his by means of the use of a noise diode. 7ZF has gone mobile with a handle-lifted carrying it up a 4,180 ft. mountain on his back, but no results. The v.h.f. news is the strength of signals reaching Longford, 14 miles away, as reported by a listener, this being the furthest distance we have the moment, until the DX comes in. 7ZF is again climbing a mountain on the next VES field day and hopes to hear something.

## 144 Mc. IN NEW SOUTH WALES

The Kingsford Radio club organized an expedition to the Blue Mountains on 27/9/50 and set up 670 Mc. gear at Blackheath. Contact was made with 39 (38 miles) with strong signals at both ends. 3AJA was heard at good strength and 3ANP was worked throughout the afternoon. A superreg. Rx R145 and a 24 element beam were used by the expedition party. 3WJ and 3AHJ wish there were higher hills further away from Sydney! A mystery station on the band has turned out to be 3AZO who at last has put a signal beyond the back fence.

3ANW has a new antenna and others have been requiring about 576 Mc. gear. At a recent v.h.f. meeting a 144 Mc. request for October was discussed and will be put about over when these notes appear. 3ON attended the meeting and received plenty of advice about the gear he should build up for v.h.f. work. Acknowledgments to VKs 3AQB, 3PO, 3RR, 3KL, and 3PF for the above material.

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# FEDERAL, QSL, and DIVISIONAL NOTES

Federal President: W. R. GRONOW (VK3WG); Federal Secretary: G. M. HULL (VK3ZS), Box 2631W, G.P.O., Melbourne.

## NEW SOUTH WALES

President.—J. Corbin, VK3YC.  
Secretary.—David H. Duff (VK3BO), Box 1784  
G.P.O., Sydney.

Meeting Night.—Fourth Friday of each month at Science House, Corner Gloucester and Essex Sts., Sydney.

Divisional Sub-Editor.—A. C. Pearce, VKEABR, 181A Balmain Rd., Leichhardt, N.S.W.

Zone Correspondents.—Nth. Coast & Tablelands: J. M. Brelbach, VK3YO, Raleigh, Newcastle.  
S. Coast: VKEAIA, Vale St., Barmaham Gardens, Newcastle; Coffsides and Lakemba: H. Hawkins, VK3VL, 37 Comfort Ave., Coffs Harbour; W. Coast: VKEAII, 251, Cumbojwa, Forbes; South Coast & Southern: E. R. Rayner, VK3DO, 43 Pettit St., Yass; Western Suburbs: A. C. Pearce, VKEABR, 181A Balmain Rd., Leichhardt; Eastern Suburbs: D. H. Knock, VK3NO, 48 Yacko Avenue, Waverley; North Sydney: L. D. Cuffe, VK3JAM, 123 Military Rd., Mosman; N. George's Bay: A. C. Pearce, VK3ALD, 88 Park Rd., Caringbah; South Sydney: V. W. Wilson, VK3VW, Cnr. Wilson St. and Victoria Pde., Maroubra.

## VICTORIA

President.—O. R. C. Semmens, VK3GS.  
Secretary.—O. Dyer (VK3DY), 19 Collington Ave., Brighton (SA 0266).

Administrative Secretary.—Mrs. R. May, Law Court Complex, 297 Collins St., Melbourne.

Meeting Night.—First Wednesday of each month at the Radio School, Melbourne Technical College.

Zone Correspondents.—Western: C. C. Waring, VK3W, 11 Lakeside, St. Albans; Sth. Coast: K. O'Rourke, VKEABR, Kilgillie, Westmore; North Eastern: T. E. Tenant, 18 Harold St., Shepparton; North Western: M. Fuller, 101 Lemon Ave., Mildura; Eastern: H. O. Kelly, VKEABR, Timarook; North Western: C. C. Waring, VKEABR, Cumming Ave., Birchb.

## WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI.—Sundays, 1100 hours EST, 7198 Mc. and 1000 hours EST 50 and 144 Mc. (Frequency checks available from VK3WI. Intra-State working frequency, 7178 Mc.)

VK3WI.—Sundays, 1100 hours EST, simultaneous only on 850 and 7198 Mc. and v-head-on on 80 and 144 Mc. bands. Intra-State working frequency 7185 Mc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI.—Sundays, 0900 hours E.S.T. simultaneous on 5750 Mc. 7198 Mc. 14488 Mc. 52.6 Mc. and 144.135 Mc. Frequency checks are given two nights weekly, and the times are announced during Sunday broadcasts. 7068 Mc. channel is used from 1000 to 1030 hours each Sunday as VK4 query service to VK4WI.

VK5WI.—Sundays, 1000 hours EAST, on 7198 Mc. Frequency checks are given by VK5WD by arrangement only on the 7 and 14 Mc. bands.

VK6WI.—Sundays, 0930 hours WEST, on 7198 Mc. No frequency checks available.

VK7WI.—Second and Fourth Sundays at 1000 hours E.S.T. on 7198 Mc. No frequency checks are available.

## QUEENSLAND

President.—J. F. Pickles, VK4PP  
Secretary.—W. L. Stevens, VK4TB, Box 6382,  
G.P.O., Sydney.

Meeting Night.—Third Friday in each month at the I.R.E. Rooms, Wickham St., Valley.

Divisional Sub-Editor.—Olive J. Cooke, VK4CG, Kurau Street, Chelmside, Brisbane.

## SOUTH AUSTRALIA

President.—E. A. Barber, VK3MD.  
Secretary.—W. L. Stevens, VK4TB, Box 1288E,  
G.P.O., Adelaide.

Meeting Night.—Second Tuesday of each month at 17 Wymouth St., Adelaide.

Divisional Sub-Editor.—W. Parsons, VK3PS, 483 Explanade, Henley Beach.

## WESTERN AUSTRALIA

President.—W. R. Hago, VK3EW.  
Secretary.—W. E. Oconnor, VK3AG, 7 Howard St., Perth.

Meeting Place.—Paddy House, Cnr. St. George's Trv. and King St., Perth.

Meeting Night.—First Tuesday of each month. Divisional Sub-Editor.—Alan A. Smith, VK3AS, 75 Weston St., Carlisle, Western Australia.

## TASMANIA

President.—O. Dyer, VK3DY.  
Secretary.—R. D. O'May, VK3OM, Box 871R,  
G.P.O., Hobart.

Meeting Night.—First Wednesday of each month at the Photographic Society's Rooms, 165 Liverpool St., Hobart.

Divisional Sub-Editor.—E. Knoll (VK3J), 77 Mollie Street, Hobart, Tasmania.

Northern Zone Correspondent.—R. H. Kilby, VK3RE, 4 Galvin Street, Launceston.

## FEDERAL

## SILENT KEY

### VK4RC

It is with deep regret that we record the passing of Bob Campbell (VK4RC) late in September.

NEW ZEALAND.—Amateur transmitting to become a more popular hobby daily. Very favourable public reaction during last two or three years due to helpful daily newspaper publicity, consequent upon research and rescue work by our Radio Emergency Corps now organized to approved government ideas under the new name of Amateur Radio Emergency Corps, A.R.E.C.  
"The same factors, plus considerable internal re-organization, is making N.Z.A.R.T. more popular with all licensed Amateurs as is reflected in our growing membership."

### INQUIRIES RE UNION MEMBERSHIP

There have been recent inquiries regarding membership in the I.A.R.U. from Amateur Societies in the Dominican Republic and French Morocco in neither case has the Society's qualifications yet been established.

### W.I.A. ACTIVITIES CALENDAR

Nov. 5: "CQ" DX Contest (see Aug. 1958 "CQ" for details).  
Nov. 25-26: Fourth All-European DX Competition, 1960—e.w.  
Dec. 8-9: Fourth All-European DX Competition, 1959—phone.  
Dec. 18: Motions for 22nd Convention due with Divisions with file.  
Jan. 27-28: W.I.A. Nat. Field Day Contest.  
Jan. 19: Convention Motions due in to Federal Executive.  
Jan. 31: Membership Roll of each Division due with Divisions.  
Feb. 28: Convention Per-Capita due with F.E.; and of Fiscal Year of Divisions.

### PROPOSED NEW MEMBERS OF I.A.R.U.

The following have been proposed as members of the International Radio Union:—  
The Israel Amateur Radio Club,  
The Amateur Radio Club, India,  
Technical Institute of Radio (T.I.R.), Syria.  
F.E. has written to the above Societies becoming members of the I.A.R.U.

### NEW MEMBER SOCIETY

The question of the admission to I.A.R.U. as a new member of Union Congolaise des Amateurs de Radio (U.C.A.R.) was carried 25 Aye Votes to 20 No. appeared. As a result, this body has been admitted to membership in the International Amateur Radio Union as the member society for the Belgian Congo and the mandated territory of Ruanda Urundi.

### ADDITIONS, ALTERATIONS, AND DELETIONS TO AMATEUR CALL SIGNS—SEPTEMBER, 1960

Additions—  
VK3DY—E. C. J. Fisher, 2 Oxide St., Warrsway.  
SPD—J. D. Sheldahl, 170 Dunning Ave., Rosbury.  
SAW—W. A. Richardson, 33 Astoral Ave., Westmead.  
ZAKA—Dr. E. W. Allison, 98 Wardell Rd., Dulwich Hill.  
SAOA—K. F. Alcock, 7 Denman St., Eastwood.  
SAOB—M. H. Brown, 19 Farrell St., Gladwinville.  
SAOS—S. C. Platt, 82, Black Fk. Housing Commission, Parkes Ave., Newer.  
SASE—E. Ashley, 99 Hastings Pde., Bondi.  
SATO—Sydney Technical College, Ultimo.  
SAW—J. S. George, 23 Strand St., Port Kembla.  
SAYM—E. A. Brennan, 9 Atkins Rd., Ermington.  
VESDO—N. T. Pettigrew, 2 Donnie St., West Coburg.  
SLAR—C. J. Oakes, 10 Station St., East Melbourne.  
SAAN—J. G. Nicholson, 101 Powlett St., East Melbourne.

SAAP—A. E. Phillips, Clifton Park Hotel, 164 Church St., Richmond.  
SABP—E. R. Pountney, Raglan St., Sale.  
SAGI—D. W. I. Gore, Flat 3, 23 Pine Ave., Glenview.  
SARD—A. H. Downard, 21 Balmoral Place, South Melbourne.  
SAJO—E. J. Gals, Flat 7, 205 Alma Rd., East St. Kilda.  
SAJZ—R. J. James, 28 Keith St., Parkfield.  
SAJY—J. G. Oakes, 10 Station St., East Melbourne.  
SALY—L. G. Watson, 434 Glenferrie Rd., Malvern.  
SAPD—J. F. O'Sullivan, 97 Cole St., Gardenvale.  
SAYC—J. J. Oakes, 204 New St., Elsternwick.  
SAUC—A. D. Cook, 480 Koozing Rd., Caulfield.

## EQUADOR THIRD-PARTY TRAFFIC

Arrangements have been completed between the governments of Ecuador and the United States to permit the handling of third-party traffic between Amateurs in the two countries. Similar arrangements have existed for many years between Amateurs in the U.S.A., Canada, Chile and Peru.

The agreement provides that no compensation for handling such messages may be accepted directly or indirectly by the Amateurs, and that the messages handled shall not be of such character as would be ordinarily sent by any other existing means of communication. In the event of a disaster, this latter restriction shall not apply.

This arrangement applies to all the continental and insular territory of Ecuador and to the U.S. and its territories and possessions, including Alaska, the Hawaiian Islands, Puerto Rico and the Virgin Islands, and to the Panama Canal Zone. It is also applicable to the case of Amateur Stations licensed by United States authorities to United States citizens in other areas of the world.

## MISCELLANEOUS COMMENTS FROM VARIOUS MEMBER SOCIETIES OF I.A.R.U.

PERU.—Because of political disturbances that took place last year, the issuance of Radio Station licenses has been delayed in general, to all new applicants. This has resulted, naturally, in a reduction of activities. It is felt that after July an easing of the situation will be experienced."

"During the last Ecuadorian Earthquake, a time when many of the OA stations isolated with relay traffic and messages, all south coast and that purpose in the tragedy and requesting that they keep the frequencies of 14150 to 14180 clear for distress traffic. For agreement on a common frequency for this work was brought home with considerable force.

"At a recent meeting of the Radio Club Peruano it was recommended that the band of frequencies of 14150 to 14180 Mc. be set aside for that purpose in Latin America and that whenever emergency traffic had to be handled it would be on these frequencies. Naturally, these frequencies are available for all normal communications whenever this class of traffic is not handled or necessary. We encourage you make known our ideas on this matter through your office."

SAUW—S. D. Wheeler, 21 Caroline St., South Yarra.  
 SAYW—J. V. Willis, 567 Whitehorse Rd., Surrey Hills.  
 SAYW—E. F. Weeborn, 124 Dandenong Rd., Oakleigh.  
 SBAZ—J. R. Trevena, 17 Mary St., Essendon.  
 VE4BX—P. Robblet, 45 Daniels St., Greenvale, Brisbane.  
 4KF—E. F. Ford, Old Northern Road, Everton Park, Brisbane.  
 4YH—R. Hodgins, 68 Abbott St., Cairns.  
 VESDV—D. B. Vaughan, 19 Marion Rd., New Mile End.  
 5HL—H. K. Lloyd, 40 Lester Terrace, North Adelaide.  
 5KP—D. M. Gray, 5 French St., Broadview.  
 5RO—C. A. Moore, 15 Cavendish Street, West Croydon.  
 VE7EX—D. A. J. Davis, 5 Crella St., Hobart.

**Alterations—**  
 VESFU—No. 1 Flat, "Wassilmo Court," Addison Rd., Manly.  
 5KT—37 Palace St., Penzance.  
 5PM—10 Meach Gardens, Narrahandah, Canberra, A.C.T.  
 5PT—3 Queens Rd., New Lambton, Newcastle.  
 5TJ—7 Fraser St., Dulwich Hill.  
 5WP—C/o Mr. C. Sawell, 717 Pacific Highway, Marks Point.  
 5XR—75 Laurel Street, Willoughby.  
 5ZP—10 Dutton St., Yagoma.  
 5ARI—8 Rawlinson Ave., Willoughby.  
 5ADJ—Great Western Highway, Falconbridge.  
 5AGN—Ovenside, 156 Howick St., Bethnal.  
 5AJU—80/70 Elizabeth St., Sydney.  
 5APJ—C/o, Rome, Carinda 4W, N.S.W.  
 5APF—88 Tozer St., West Kempsey.  
 5AKB—Flat 16, "Bedford," The Esplanade, Elizabeth Bay, Sydney.

VE3MY—17 Devon St., Cheltenham.  
 5DW—C/o, R. A. Robinson, Alameda.  
 5GT—149 Ashbury Grove, Abberdon.  
 5ZV—3 Doral St., Hughesdale.  
 5JAP—"Sefton," Burwood Rd., East Burwood.  
 5JOC—49 Mackay St., Brisbane.  
 5ADW—7 Salisbury St., Balwyn.  
 5AKS—6 Heatherleigh Place, East Malvern.  
 5ANK—Shoulder Rd., R. E. Robinson, 28 Grandview Ave., Piacere Vain South.  
 5WIA—60 Eighth St., Parkdale.  
 VE4DP—Imbros St., Warrell Heights, Brisbane.  
 4DN—Hurdstone St., Geystrone.  
 4ES—40 Kingsholme St., New Farm, Brisbane.

4OM—M.V. "Dell," C/o Island Industry Board, Thursday Island.  
 4ON—"Hollis," Lamington Ave., Doomben, Brisbane.  
 4DQ—"Red Dome," Flat 3, Prince Edward Pde., Redcliffe.  
 4TW—Mendham St., Myerston East, Townsville.  
 4ES—222 William St., Rockhampton.  
 VE5WX—58 Marion Rd., Brooklyn Park.  
 VE5JH—3 Conolly St., Geraldton.  
 5BM—C/o Broadcasting Station 6CL, Collie.  
 VE7CP—Williams Ave., Queensdown.  
 VE9PM—C/o Department of Civil Aviation, Rabaul.

VE3JM—Cancelled.  
 5ME—Cancelled.  
 5ALC—Cancelled.  
 5AMN—Cancelled.  
 5RT—Cancelled, now operating under VE4YH.  
 5AUM—Cancelled, now operating under VE3AJM.  
 VE3ABG—Cancelled.  
 5AMG—Cancelled.  
 VE4LA—Cancelled.  
 VE5VS—Cancelled.  
 VE5CH—Cancelled.  
 5ST—Cancelled.  
 6TW—Cancelled.  
 VE7GD—Cancelled.  
 7LS—Cancelled, now operating under VE3AJJ.

## FEDERAL QSL BUREAU

RAY JONES, VICRX, MANAGER

Due to a typographical error the incomplete address of VE9AO was given in October "Amateur Radio." The complete QTH is: AD96, L.A.C. Cronin, W. VE9JC, Transmuting Station, R.A.A.F. Moomie, Admiralty Islands.

The present QTH of ex-VE4KO is particularly wanted by YU2JP VE4KO left Queensland after the war and it is believed he went to New South Wales. Anyone knowing his present whereabouts please communicate with this Bureau.

While on the subject of appointments, it is with great pleasure that I read of the appointment as DX C.O. Manager, of that old fox "Morrie," VE8RM. No longer will he have the time to lay in wait for the unwary DX Joking aside, a better choice for the appointment could not have been made. Any thing "Morrie" undertakes he does well, and is always prepared to devote time, energy and an abundance of "nose" to the job in hand. It is hoped that he will continue in the position for many years to come.

Just a reminder of the Fourth All-European DX Contest, scheduled for CW from 0001 GMT, 15th November, 1950, until 2400 GMT, 22nd November, 1950, and for Phone from 2nd December, until 1st December, 1950. Times for Phone are similar to the CW section. This year this contest is being sponsored by the S.A.A., the Swedish Amateur Radio Society. Full information as to rules, logs, etc., appear elsewhere in this issue.

A new certificate pops up each month. Here is the latest "QRY," the Independent Amateur Radio Magazine of Box 385, Stuttgart, Germany has created this latest award styled W.A.E.—Worked All Europe. There will be two sections of the Award, namely, exclusively CW, and exclusively Phone. At present Europe consists of 54 geographically defined countries, 15 islands or groups of islands, and 8 miniature states, etc. These will form the basis for the award. One point is scored per country on every Amateur band below 50 Mc. Contact on bands higher than 80 Mc. count two points. When 100 points have been scored and the necessary verifications received, these should be forwarded to "QRY" for checking and issue of the certificate will follow. If later on your score reaches 150 points, an endorsement will be issued. Germany may be worked twice, i.e., once with German nationality, and once with members of the occupation personnel. Contacts prior to 1st December, 1949, will not count. Further details as to country lists may be obtained from this Bureau. Interested in this one, VE5KX.

Max Rieger, VE9MR, in high glee after contacting ACARF phone on 21st September, supplies the following information on frequencies used by ACARF. When using his 6 volt vibrator powered rig, he uses CW 14080 and Phone 14160 and 14301. When using the BT9 80 watt rig he uses 14160 Kc. Communicating on the VE7LZ Contest, Max states he is building a 10 metre beam constructed of aluminum spars out of a "Zero" lying on the side of the Madding alirip. He hopes to have it completed and fired up for the phone section of the Contest. The first week-end of CW session was a fiasco for him as conditions were very poor and power troubles were manifest.

George Luxon, VE5RX, the doyen of QSL Managers, DX hunters and certificate swipers, accepts a challenge thrown down by VE4GG on page 17 of September "A.R." as to whether any other station possessed a QSL from VE8. George has all districts, his VR8 being VR8XT when Al Tragger, of undying Australian Island Mission fame and ex-VE5X, was operating VR8XT. George also states that Pete

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## LARGE RANGE OF RADIO BOOKS, STATIONERY AND NOVELS ON DISPLAY

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Bowman, VK2PM also has all districts including VK2VT so VK4GQ is tuned in two places. Maybe there are others? George recently received the OTC Certificate from the A.R.R.L. and now has all the certificates from the various countries. He hadly needs AC4 for W.A.E. The dope I have given in the preceding par almost makes a present of it to Tommy, George, Yast.

Some QTHs of interest:-  
VRIE (ex-VRIE) B. Schroeder, care P.A.A. Canton Island, Phoenix Group.  
CN4JL Jim, Navy 214, Box, F.P.O., New York, U.S.A.  
ZXBIB, Bob, Radio Station, Marston, Cook Island.

YB4AD, Lon, Box 2208, Caracas, Venezuela.  
YB4AD, Bruce McLeod, Niagara, Bolsonia Island.  
Stations wishing to avoid a serve of anti-UN propaganda should shun a contact with OX0UX with alleged QTH as Prague. Operator Minsk at above station has on several occasions during 16 m of contact by OX0. OX0UX on 1.6 and of 14 Mc. with TA 0W

Welcome back on air to Tommy Lelliot; VKE2AZW, ex-VKE2W, who after hibernating for 15 years has been back on the air. Tommy has been working the 21p to 10p time period. Tommy acquired himself a wife. When passing above information on to my wife and trying to refresh her memory on VKE2AZW, she said, "Tommy, you have brown eyes, not brown eyes". Tom's eyes never worried me any, but the blightor would never allow me to accuse state of retrogression. He has a reputation for his air. He was a two-man reunion at the "House of Commons". Tom was one of the pair, some who was the other.

Pel's FBAC, advising that at long last the vessel for Wallis Island has been ordered by the British and pieces for André Bailliet's idle transmitter FBWA4 should be heard any day now. There is a distinct possibility that Pel's trip will be returning to France early in 1951 and a further possibility of his return to New Caledonia at the end of the same year.

## NEW SOUTH WALES

The monthly meeting of the Division was held at Science House, Gloucester St., Sydney, on 22nd September, 1950. The meeting opened at 8 p.m. and the first business was the reading of the minutes of the previous meeting which were read, after which, general business was dealt with. Several new members admitted to the membership. The Divisional Military Radio Club was one of those admitted, through the agency of the Secretary.

Dr. Allison, ex-VK1RA, who was accompanied by his mother and Miss Beale, were officially welcomed by the President, Mr. J. M. Corbin, VK1CZ. Dr. Allison was welcomed by the President, Mr. J. M. Corbin, VK1CZ. Dr. Allison was welcomed by the President, Mr. J. M. Corbin, VK1CZ.

Dr. Allison then assumed a strategic position as darkness prevailed, and a running fire of commentary enlightened those parts of the film which were without sound. Particularly interesting were the scenes of Kerguelan Island's old whaling station, now a desolate and abandoned ruin. Graphical shots taken during the erection of some special 70 feet masts, intrigued the audience. These were erected by means of a jury rig and the help of a bulldozer, and since it was impossible to secure the normal 100 ft. of the crane, 40 gallon drums filled with rocks were used to provide the weight.

Big Ben Peak on Heard Island was most impressive, the more so when the party discovered that the supposedly dead volcano was once again active. The eruption was normal, the lava being blue, green, yellow and red—the red which turned out to be from the active volcano. A party endeavoring to reach the top of the cone, and the lava was forced to turn back by lava after climbing up for several thousand feet. Most of the films were in colour, and some of those were taken by Alan "Smiley" Murray, B.A., who is a professional photographer. The film showing, Malcolm Ferry, who is a foundation member of the Institute, moved a hearty vote of thanks to the Director.

The meeting was presided at the first meeting of the Institute, held at the Hotel Australia in March 1910, and, as an early Secretary, was instrumental in choosing an operator for Dr. Maxwell's expedition to Macquarie Island. The meeting was held at the Hotel Australia in March 1910, and, as an early Secretary, was instrumental in choosing an operator for Dr. Maxwell's expedition to Macquarie Island.

It was stated that Don Christenson, may deliver a lecture on "Radio Waves in the Milky Way" at the November meeting. Professor Bailey's experience in the operation section was on the slide only in bathing costumes, until forced to cover by biting winds. Dr. Allison answered many questions by being up and down the main hall, and the steady flow from the audience.

WESTERN SUBURBS  
Since the 20 metre band folded up recently, the local addicts were left to have their own way, although the stalwarts still keep trying. On 144 Mc. there are slivings of activity and ZACH comes in from the States. ZACH has been working on 144 Mc. for some time. ZACH has been working on 144 Mc. for some time. ZACH has been working on 144 Mc. for some time.

20Q has been heard trying his new driven beam. Heard working V81DT after a long lapse of time. ZABO working on 144 Mc. ZABO working on 144 Mc. ZABO working on 144 Mc. ZABO working on 144 Mc. ZABO working on 144 Mc.

## IMPORTANT

In order that the January issue may be printed before the Christmas holidays, Advertisers and Contributors are requested to forward their copy so that it reaches Melbourne not later than 12th December. We appreciate the co-operation received last year in this regard and hope that it will be repeated.

## EASTERN SUBURBS

A fair amount of activity prevails in the area, and the 7 and 14 Mc. bands are well worked. Ernest Ashley, of Bondi. He is another example of what can be done by the older generation in the way of sticking at the handles until being able to take a rest. O.G. has been working on 144 Mc. for some time. O.G. has been working on 144 Mc. for some time. O.G. has been working on 144 Mc. for some time.

That old radio club that goes by the name of "Western Suburbs" has been working on 144 Mc. for some time. Western Suburbs has been working on 144 Mc. for some time. Western Suburbs has been working on 144 Mc. for some time.

14 Mc. phone DX chase of yore, and is heard across the 14 Mc. station of a 14 Mc. station. Colin was in the news lately when he came near losing his ocean speaker "Kyeena". Also on 14 Mc. phone is RHP, who has blossomed out of the question. RHP has been working on 14 Mc. for some time. RHP has been working on 14 Mc. for some time.

RHP puts in an appearance now and then on 14 Mc. phone. Octa doesn't appear to be interested in 14 Mc. phone. Octa doesn't appear to be interested in 14 Mc. phone. Octa doesn't appear to be interested in 14 Mc. phone.

Who? Why? Why the old "Mid Luck" of course! FAX can be heard frequently knocking over a few Ws on the key on 7 Mc.

14QZ working on 14 Mc. DX on 14 Mc. I haven't heard that cathode modulated phone for some time. Listened the other day to 20Q on 7 Mc. phone talking to 144E. Always a station with pleasant to listen to. 144E has been working on 144 Mc. for some time. 144E has been working on 144 Mc. for some time.

## NORTH COAST AND TABLELANDS

142N, Jack Gerard at Coffs Harbour, is slugging a combet and has just completed a hard switch-off rig for 80, 40, 20 and 10 using 811, 80 feet and 475 drive. Antenna half wave SSB, 60 feet above the ground. 142N has been working on 144 Mc. for some time. 142N has been working on 144 Mc. for some time.

142Y busy with the new harmonic 142Y going on holidays and expects to meet his boy at Wey Way Wey Way. 142Y has been working on 144 Mc. for some time. 142Y has been working on 144 Mc. for some time.

## HUNTER BRANCH

The New Branch Secretary, Varley Pitts, 28Y, seems to be settling down to the job very nicely. What with work and Branch activities, Varley is still not on the air. The recently formed committee to cope with the next 12 months, and this will help the Secretary and President of much work.

Amateur Radio, November, 1950



The President called on the meeting to show their appreciation to S/Lt. Baragrove for his 144 Mc. talk on Saturday night. During the talk, one Jack Groves was busy with a wire recorder. Interval was taken at 2140 and we noticed that the Secretariat was busy with the recording book and application forms. Upon resumption of business, reports were called for from the various groups.

The Secretary submitted a total of 13 membership applications for the meeting's approval, and all these members were admitted to the Division. The most important item of general business was the 15th Anniversary of the General Wireless Society. The matter of check visits in hand and issued a questionnaire to members so as he can get some idea of the amount of work they are doing in the country. Window space in one of the big retail firms is trying to be arranged, to stage an Amateur gear display. The President, Mr. J. W. Jones, on Friday, 1st November. Also there will be visits to Emswold Airfield, Lyndhurst Short Wave Station, and concluding with a big Ham Pot at Wattle Park. For further details listen to the broadcasts every Sunday morning. The President expressed the hope that every member of the Division will be able to make it to the country for a mighty success. Remember the date, November 25 to December 1. The agenda time for the next meeting is 10.15. The Secretary, Mr. J. W. Jones, is to be delivered by Mr. Len Jackson. The meeting closed at 2230 hours.

SADT found the nearer hills looking for suitable sites for the station. SARA and SARA were interested. SBY coming more active on the 40 metre band; also SARA putting in a good signal on the 40 metre band. SARA and SARA were interested in the personnel of SARA, SARA and "Skipper". This should please the President Secretary and relieve him of any worry. SARA has been very busy with "show" business.

Heartly congratulations to Ian Sewell (SIR) on his engagement to Miss Lynette Parkinson, of Haxthorn. Is that right? You are ready to sell your rig—E.L. SKE playing around with a wire recorder. SKE in the throws of building a 100 Mc. rig. SARA and SARA are interested in SBY buying a car to eliminate cats. SKE been on the sick list.

For the purpose of getting some news about the boys in the metropolitan area, the President passed around at the general meeting a sheet for anyone to write down plans. This trouble is that everyone wants to do something, but few are willing to do it. Hence very little appears. How about it, gang? Let's have some news and notes on what is happening around.

#### MOORABBIN RADIO CLUB

The September monthly meeting took place as usual at the club rooms, 700, Hill, Moorabbin, on Friday 15th at 8 p.m. The President (SKE) occupied the chair. Unfortunately owing to circumstances, the meeting was not very well attended and a dry for an agenda item. The attendance was fair, but we have found out since that a lot of boys are away from the club. The President's correspondence were read, the President suggested a "Question" Night. This proved quite successful and brought forth several bright ideas.

The "Honorary Membership" officer reported on the launching of the Certificate scheme and stated that quite a lot of members have been asked the question. The Certificate was presented to the meeting for approval and the boys expressed their delight with the design and wording.

The club's receiver has been modified and is working fine. The TX is now completed and only awaiting final adjustments. The boys were appreciative of the alterations made by the trustees of the hall to the improved lighting facilities. The meeting was a success. The next meeting will be on Friday, 17th November. Also (also visitors will be welcomed), and hear the report from the Club on the 15th Anniversary of the Annual Meeting in Friday, 17th November.

#### VICTORIAN RAILWAYS INSTITUTE WIRELESS CLUB—VKRSI

The monthly meeting of the above Club was held in the clubhouse on 6th October, there being a fair attendance of members. After the general business, the President, Mr. J. W. Jones, was busy with a wire recorder. Interval was taken at 2140 and we noticed that the Secretariat was busy with the recording book and application forms. Upon resumption of business, reports were called for from the various groups.

The Club also extends an invitation to any Amateur who is interested in the active interest in the club's activities. We will be glad to see you on the first Thursday of any month. Don't forget fellows, the club is running a Drive in the V.R.I. Hall, 100, Victoria Road, Melbourne.

#### CENTRAL WESTERN ZONE CONVENTION STAWELL—SEPTEMBER 10

A Convention has been defined as "an assembly" three certainly was an assembly of Amateurs, Associates, and interested parties at Stawell on 10th September. The meeting was a success. The boys expressed their delight with the design and wording.

really started late on the Saturday afternoon that that scout from the open plains. SARA, got lost in the woods and was not seen again.

From then on the town rapidly acquired numerous mechanical transport devices draped with various and sundry types of antennas from the humblest to the four-circuit beam (none however came up to the standard as set by SARA at Chastelaine House near). The main street was filled with earnest QRPers. The main street was filled with earnest QRPers.

The overhauls then descended in force on the QRLs of SARA and SARA, each carrying a long and short antenna. The boys were busy with a wire recorder. Interval was taken at 2140 and we noticed that the Secretariat was busy with the recording book and application forms. Upon resumption of business, reports were called for from the various groups.

Sunday 10th at 10.30 a.m. SARA and SARA were interested in the personnel of SARA, SARA and "Skipper". This should please the President Secretary and relieve him of any worry. SARA has been very busy with "show" business.

A competition in the shape of a crossword puzzle was then conducted by SARA and resulted in a list of winners. The boys were busy with a wire recorder. Interval was taken at 2140 and we noticed that the Secretariat was busy with the recording book and application forms. Upon resumption of business, reports were called for from the various groups.

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Various suggestions were then put forward for the conduct of the next annual convention to be held about the same time next year, and if they can be carried out should make things brighter and better. At the conclusion of the meeting a programme of movie films were shown, and then some of the "talkers" for the day were given. The boys were busy with a wire recorder. Interval was taken at 2140 and we noticed that the Secretariat was busy with the recording book and application forms. Upon resumption of business, reports were called for from the various groups.

We also owe a debt of thanks to SARA: Bill provided the "talkers" for the day were given. The boys were busy with a wire recorder. Interval was taken at 2140 and we noticed that the Secretariat was busy with the recording book and application forms. Upon resumption of business, reports were called for from the various groups.

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SARA is busy getting portable gear ready (both v.h.f. and m.f.) for his forthcoming holiday, but will have all his gear in the country for a mighty success. Remember the date, November 25 to December 1. The agenda time for the next meeting is 10.15. The Secretary, Mr. J. W. Jones, is to be delivered by Mr. Len Jackson. The meeting closed at 2230 hours.

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of his 144 Mc. superreg in an endeavour to cut down receiver radiation. Jim takes a dim view of the use of the 144 Mc. superreg in an endeavour to cut down receiver radiation. Jim takes a dim view of the use of the 144 Mc. superreg in an endeavour to cut down receiver radiation. Jim takes a dim view of the use of the 144 Mc. superreg in an endeavour to cut down receiver radiation.

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#### NORTH EASTERN ZONE

Last week's hook-up was a washout due to the bad conditions prevailing on 40. However, around the week of the 10th, the weather was just what we were waiting to be called in on the net. Heard a VKI working 2KR, so the President was on deck with a 40 Mc. rig. SARA and SARA were interested in the personnel of SARA, SARA and "Skipper". This should please the President Secretary and relieve him of any worry. SARA has been very busy with "show" business.

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Hear that a couple of local chaps are going out as far as to defeat the most correspondents. They claim he can't read it. "Cuda!" I'm doing my best but what with my inability to read it and their inability to send it, it is no wonder things aren't reported properly. SEE on weekly sheet with old some member, SDW (Doug), might have heard a lot of QRM hadn't blasted you both out. XYZ claims I'm only an over-dropper with fancy titles anyway. JACK has a second op. on Saturday mornings to do his bathing, send out his QSL cards, keep the log in order, tidy the bench, sweep the shack, etc. "Geez Who?"

XYZ assures me that he will soon be heard on 40 and 50 after his sojourn on 8 and 3 metres. Reason is he has a v.t.c. that he thinks may stay put now. However a 40-80 metre antenna is a little longer than a 6 metre one. BU has gadgets galore and I saw the result of the antennae heyer off he was making, works beautifully too. Anybody interested should contact Alan and he can explain how it works because I can't. A lot of portable gear laying around also.

YYV Howard, is again in hospital and by the time this reaches print, we hope he is well again. Best wishes from all the boys. Howard SAGT has a c.r.o. fitted to his receiver to take modulation checks on incoming signals. Don't forget to allow for the non-linearity of the i.f.s. But as you will be giving over-modulation reports. Talking of c.r.o.s. SAGE was trying to copy SPD by watching a dot bounce on the screen. What about using your fret meter for h.f.o. Les and save a newswoman break down? SPD still waiting for a home light plant, so the zone still awaits SPD's carrier to be modulated by his voice. SPD joined in the hook-up to obtain news of the zone's activities. Heard SKE had visited Ballarat and complained about the cold something about his writing hand being frozen off. Next time you go tripping Ren, how about a note via the circuit mail box? (film can to the un-filleted). STZ managed to get his 40 metre aerial up on Sunday but not in time for the hook-up. Also absent from the hook-up were SACK flying (I think), SAPP skidding on 8 metres, SAT, SPE, and SAGO. Anyway if these boys had turned up, it would have been a marathon; golly can you boys back?

#### SOUTH WESTERN ZONE

SAC, of Coleraine, still has his 60 m. sheds with SHD on Sundays and hopes to be really active

soon. STI is contemplating a super duper new rig. STV had a visit from Brian Paine, a.w. who was one of the intrepid four who camped at Lake Burdekin last Ballarat Convention. Brian is new to the R.A.A.F.; but Jack Brinn, heard SIA putting out a very nice rig; why don't we hear more of you on the lower frequency bands Jack? SBI is expecting some tape recording equipment from England soon and hopes to have a tape recorder as well as the wire job before very long. SUT active on lower frequency bands (10 and 16 have been the K.I.); using a 400 ME. It with series cathode modulation. SVP has put a rhombic on the States, 12 waves per side and is getting colonial results. Harry is also on 40 occasionally using Command rig with 15 w input. SARG has also been heard on 80 after local station closes down. JAMM has recently got himself a new car and of course has not had time to go on the air much.

SIVF changed his 20 metre beam and put up a six element c.a. one, but it isn't much good, so the four element one is now back on the tower. SBI has had another attack of eye trouble. Had about Bert, I do hope it gets better very smartly. SVA has been lamenting the loss of one only 20 metre-grounded grid pre-selector; must have received quite a shock when it turned up in the mail one day (cables and all).

S14 Mc. is still becoming the S.W. Zone and SXL and SGM are still bowling them over with their respective four over four and five over five beams. SAGD has now got a SFT outfit and hopes to have it going satisfactorily soon.

SAGL, been rehabbing Rx, now putting out the better signal to when he first came on. SAGD has come up to 40 using SFT rig one, SGT in a full; operates on both phone and c.w. Has worked VREAS and quite a few ZLs and Ws. SAGD having a bit of trouble with the rig, has worked quite a few Ws on 40. SBT heard operating from his portable location with a Type 3 under his portable call SAGU; puts out an extra good signal. SALT complains of poor conditions on 20, but still manages to get quite a bit of DX. SAGD was at his shack recently and John worked PERAC who gave him 5 and 2 plus. SAGE hopes to have his new mast in the air shortly and now has everything wired up to turn the beam. SIO works quite a few VEGs on 40. STV heard in the K.W. zone net, and very much. NI to report from SVP, SSW, SARE, SGM or SAGE. SAGN has built up a transceiver

for 2 m. although have not heard of his activities on that band yet.

#### GEELONG AMATEUR RADIO CLUB

The Geelong Amateur Radio Club held an exhibition night recently. This was the first of its kind to be held in Geelong. Many pieces of modern equipment were on display including receivers and transmitters for v.h.f. and other bands. During the evening the club's transmitter was operating on 40, 80 and 2 metres. At a later meeting the lecturer was SAGC who gave a very fine talk on trans-former design and made use of the blackboard throughout his lecture. At the next meeting members were favored with a lecture by a guest. He was Mr. Cruckshank B.E. A.M.I.E., whose subject was on generators including the i.f. generator. The lecture was very interesting and members "fired" questions at Mr. Cruckshank from time to time. The President of the Club, SAPP, thanked the lecturer for his talk. A visitor to the club was a.w.1. Hoar Stearn.

#### FAR NORTH WESTERN ZONE

The gang from this zone are still rather quiet, so far as activity on the air is concerned. STI is on most week-ends and occasionally through the week. The new receiver is working very well and CHS, the 2nd op., keeps Chas posted with the doings on the bands. Sunday morning hook-ups are fairly well attended. SPC, SAGC, STI, SAGL and SIZ usually making the grade. SMF appeared on 7 m. with c.w. one week-end. Let's hear from you again Harry. SSN worked portable from him for a while, using a Type 4 on phone and c.w.

SAPC spent his holidays in Sydney. Bring any good gear back? SSN, STI and CHS gathered at SIZ's shack on a couple of Friday nights. Chas and Max spent most of the night trying to fathom out how the old SIB worked and wrecked a few before they gave it away as a bad job. Graeme and CHS were left to work the rig and managed to have the old SIB worked and wrecked a few before they gave it away as a bad job. Graeme and CHS were left to work the rig and managed to have the old SIB worked and wrecked a few before they gave it away as a bad job. Graeme and CHS were left to work the rig and managed to have the old SIB worked and wrecked a few before they gave it away as a bad job.

Jim Power, one of our Associate members, sits for his ticket in October. Best of luck, Jim. Max White, an Associate from Ovens, was in Mildura recently and pounded our ears about Ham Radio. Max hopes to sit for his ticket soon; best of luck

## "NI-K" Multiple By-Pass Ceramic Capacitors SCREW FIXING TYPE—also available with wire leads

The development of Unilator K3000 dielectric has, for the first time, combined a very high dielectric constant (3000) with a high insulation resistance at all working temperatures, maintained even after extended life tests at high voltage and elevated temperatures. The small size of these U.C.C. capacitors keeps inductance low, and they are thus eminently suitable for By-Pass work in television and other high frequency receivers. Also available in WIRE LEAD TYPE.

- TOLERANCE OF CAPACITANCE: Capacitances are guaranteed to be not less than the stated values at 20° C. Test conditions 130 Kc/s 10V, R.M.S.
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- WORKING VOLTAGE: 500V. D.C. or 250V. R.M.S. A.C. (20-60) between any two connections.
- TEST VOLTAGE: 1500V. D.C.
- DIELECTRIC: Unilator K3000.

CTH Type	Capacitance	Dimensions D	L	Base Max.	Dim of Flats
CTH 310/5	500 pF	0.12"	0.47"	6 BA	0.193"
CTH 310/5	1000 pF	0.12"	0.47"	6 BA	0.193"
2CTH 315/5	2 x 500 pF	0.18"	0.57"	6 BA	—
2CTH 315/5	2 x 1000 pF	0.18"	0.57"	6 BA	—
3CTH 315/5	2 x 1500 pF	0.18"	0.67"	6 BA	—
2CTH 422/5	2 x 2200 pF	0.24"	0.94"	4 BA	—
3CTH 315/5	3 x 500 pF	0.18"	0.67"	6 BA	—
3CTH 315/5	3 x 1000 pF	0.18"	0.67"	6 BA	—

## ★ UNITED CAPACITOR CO. PTY. LTD. ★

433 Punchbowl Rd., Enfield, New South Wales  
Postal: Box 19, Enfield. Phone: LF 3511

Associated with Technic Limited of Australia and Telegraph Condenser Co. Ltd., British Insulated Cables Ltd. and United Insulator Co. Ltd. of England.



# NOTICE TO HAMS!!

For that Power Supply feeding the low to medium powered Modulator or Transmitter the A. & R. Type PT1400-19 is the answer. Primary: 200, 220, 230, 240; Secondary: 565, 425, c.t., 425, 565, at 250 Ma., two 6.3v. 3 Amp., one 5v. 3 Amp., two 2.5v. 2.5 Amp. Price (including tax), £4/18/4.

In response to numerous requests for a more universal high tension transformer, we have re-designed our type PT1371-8. It is our belief that the new range of taps will meet the requirements of both "Hams" and "Sound Men" alike. The new PT1371-8 now features the following:—  
Primary: 200, 220, 230, 240 volts; Secondary: 500, 600, 750, 850, 1,000 volts per side of C.T. at 300 Ma. The price of this conservatively rated item is unchanged by the modification, and is obtainable at the old price of £6/8/1 including tax.

A further A. & R. type is a must with many Hams—namely our AT1202-22 mains adjusting transformer. This item is tapped from 180 to 250v. in 10v. steps, and will continually handle a 500 V.A. load—ample for the total drain for any rig. The price of the AT1202-22 is £3/17/4 including tax. Also available are mains adjusting transformers rated at 100, 250, and 1,000 V.A.

All A. & R. Products are obtainable from:—

Wm. Willis & Co., 428 Bourke St., Melb. (MU 2428); J. H. Magrath Pty. Ltd., 208 Lt. Lonsdale St., Melb. (Central 3888)  
Homecrafts Pty. Ltd., 290 Lonsdale St., Melb. (Central 4311).

## A. & R. Electronic Equipment Co. Pty. Ltd.

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Phones: MX 1159, MX 1150

Setting a New Standard in Communication Receivers—

### The "Commander" Double Superhet.

Free Data Sheets on Request

Interstate Representatives: West. Aust.—Messrs. Atkins (W.A.) Ltd., 894 Hay St., Perth. Queensland—Messrs. A. E. Harrold, 123-5 Charlotte St., Brisbane. In other States direct your inquiries to firms handling Bright Star Crystals.



Valves, new, boxed, RCA 834s, £1/8/- each.

6C4s, 12/- each.

Limited number of the following Taylor Tubes: T220s, £2/10/- each; TB35s, £6/10/- each.

Transmitters altered for Bush Fire and Fishing Boat Work.

CRYSTALS, as illustrated, 40 or 80 mx., AT or BT cut. Accuracy 0.02% of your specified frequency, £2/12/6 each.

20 metre Zero Drift, £5 each.

Large, unmounted, 40 or 80 metre, £2 each.

Special and Commercial Crystals—Prices on application. Crystals re-ground, £1 each.

BRIGHT STAR CRYSTALS may be obtained from the following Interstate firms: Messrs. A. E. Harrold, 123 Charlotte St., Brisbane; A. G. Healing Ltd., 151 Pirie St., Adelaide; Atkins (W.A.) Ltd., 894 Hay St., Perth; Lawrence & Hanson Electrical Pty. Ltd., 120 Collins St., Hobart; Collins Radio, 408 Lonsdale St., Melbourne; Prices Radio, 5-6 Angel Place, Sydney.

A.W.A. Split Stator Transmitting Condensers, high voltage, £2/15/- each.

Screw-type Neutralising Condensers (National type), suits all triode tubes, Polystyrene insulation, 19/6 ea.

Prompt delivery on all Country and Interstate Orders.

Satisfaction Guaranteed.

**BRIGHT STAR RADIO**

1839 LOWER MALVERN ROAD, GLEN IRIS, VIC. Phone: UL 5510.

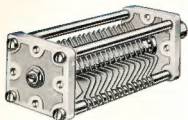


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# EDDYSTONE

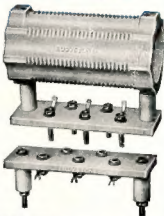
## Transmit. Condensers



The Condensers listed below are of identical construction, only the length varying according to the capacity values. Ceramic end plates, 2 1/2" square, are employed and the amount of metal is a minimum consistent with rigidity. A single point rotor earthing connection is provided, circulatory R.F. currents thereby being prevented. Lugs on the stators permit either the direct fixing of the associated coil or they can be used for connections to stand-off insulators, etc. Alternative contact points are available. The vane spacing is 0.08"—adequate for high voltages, provided D.C. is removed by the insertion of a blocking condenser between rotor and earth. Metal parts, including spacing pillars, are supplied for three point chassis fixing. Standard 1" spindle. Each Condenser is of the split stator type, directly applicable to balanced circuits. For aerial tuning and single-ended circuits, one section may be used singly, or both can be connected in parallel. A wide range of working capacities thus becomes available. For example, the Cat. No. 612 is 25 pF. maximum overall as split-stator, 50 pF. one section, and 100 pF. with the stators in parallel. The Cat. No. 611 is fitted with built-in Neutralising Condensers (one at each end), variable between 2.5 and 7 pF. Cat. No. 611: 25 pF. per section with Neutralising Conds. Cat. No. 612: 50 pF. per sec. Cat. No. 614: 100 pF. per sec.

## Frequentite Coil Formers

Frequentite Ceramic Former for transmitting and similar apparatus. The Former is 5" long by 2 1/2" diameter, and may be mounted as illustrated or on Frequentite Pillars. Spiral grooves take 26 turns of wire, up to 12 s.w.g. Fourteen holes are provided for leads and coil taps. The Former is designed for coils covering 3 Mc. upwards. Cat. No. 1090.



### FREQUENTITE SUB-BASE

The Sub-Base is in Frequentite Ceramic and is easily attached to the Former by the two bolts and Frequentite Pillars provided. It can be used separately as a base for self-supporting inductances. Helically slotted power type plugs give positive electrical contact and even fitting to the Ceramic is assured by lead washers. Leads are secured by heavy gauge tinned phosphor bronze self-locking soldering tags.

Cat. No. 1091.

### FREQUENTITE BASE

The Base is provided with Frequentite Pillars for above chassis mounting. Heavy duty power type sockets give sound electrical connection with Sub-Base and lead washers on each socket ensure even fitting to Ceramic. Leads are secured by heavy gauge tinned phosphor bronze self-locking soldering tags. Cat. No. 1092.

## AVAILABLE from all EDDYSTONE DISTRIBUTORS

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The DEE WHY PRINTING WORKS is making available to the Amateur Experimenter a Special QSL Card Printing Service. Knowing the requirements of Hams, we are confident the service offered will be unsurpassed in Australia.

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Bracket mounted on horizontal surface (window sill or ledge).

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Your Radio Parts Supply House are distributors and stockists of the world famous Eddystone Short Wave Components. Avail yourself of the opportunities while at Magrath's to inspect the wide range of valves, condensers, coils, dials, resistors, transformers, in fact all radio parts.



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